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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,017	01/20/2004	Kaiji Nonaka	9281-4750	3123

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EXAMINER

WANG, JIN CHENG

ART UNIT PAPER NUMBER

2672

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/761,017	Applicant(s) NONAKA, KAIJI	
	Examiner Jin-Cheng Wang	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/20/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. U.S. Patent No. 6,285,347 (hereinafter Watanabe).

Claim 1:

Watanabe teaches an image information display apparatus comprising:

A display unit for displaying image data (Figs. 1 and 4); an input unit for performing scrolling of the image data displayed on the display unit (Fig. 2); and a control unit for controlling the display unit and the input unit (Fig. 2), wherein the input unit has a manipulation unit manipulated by an operator (Figs. 2-4), a position sensor for detecting a manipulation state of the manipulation unit (e.g., column 4, lines 40-52), and an actuator for supplying force-feedback to the manipulation unit (column 4, lines 40-52), wherein the image data includes a prescribed point (column 4, lines 40-52 and column 6, lines 29-44),

Wherein the control unit calculates an amount and direction of manipulation of the manipulation unit on the basis of positional signals output from the position sensor (e.g., column 4, lines 40-52 and column 6, lines 29-44), and performs the scrolling of the image data on the basis the amount and direction of manipulation of the manipulation unit obtained (e.g., column 4, lines 40-52 and column 6, lines 29-44), and wherein in the course of scrolling the image data, the

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control unit calculates the deviation between a direction from reference point in the display unit to the prescribed point in the image data and the direction of manipulation of the manipulation unit, and controls drive of the actuator to decrease the force-feedback to be supplied the manipulation unit with a decrease in the calculated deviation (e.g., column 4, lines 40-52 and column 6, lines 29-44).

Although Watanabe does not explicitly disclose the claim limitation of “an actuator for supplying force feedback to the manipulation unit,” Watanabe implicitly teaches or at least suggests the claim limitation because Watanabe discloses supplying feedback information after manipulation of the mouse or the finger on the touch pad on the pointer to indicate the scrolling speed and direction of the digital map when the distance between the start point to an end point relating to the desired direction from the start point to the end point is determined and the speed of the displayed portion of the digital map with regards to the direction of the arrow portion of the pointer is made small when the distance is small. Therefore Watanabe explicitly discloses an actuator such as capacitor sensors (column 4, lines 40-52) to supply feedback (such as the length and direction of the arrow portion) to the manipulation unit using mouse-finger-touch-pad combination (column 6, lines 29-44).

Although Watanabe does not explicitly disclose the claim limitation of “in the course of scrolling the image data, the control unit calculates the deviation between a direction from a reference point in the display unit to the prescribed point in the image data and the direction of manipulation of the manipulation unit, and controls drive of the actuator to decrease the force-feedback to be supplied to the manipulation unit with a decrease in the calculated deviation,” Watanabe implicitly teaches or at least suggests the claim limitation for the following reasons.

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Watanabe discloses that, when the distance between the start point (a reference point) to an end point (a prescribed point) relating to the desired direction from the start point to the end point is determined (i.e., manipulation direction is determined) and the speed of the displayed portion of the digital map with regards to the direction of the arrow portion of the pointer is made small when the distance is small. It can be seen that Watanabe discloses a direction from a reference point in the display unit to the prescribed point in the image data because the start point is in the display unit and the end point is the desired point in the map image. Watanabe further discloses the direction of manipulation of the manipulation unit because the desired direction of manipulation has been indicated by the operator (column 6, lines 29-44) and the amount and direction of manipulation are determined at the current position of the display reference point to indicate the speed and direction of scrolling (column 6, lines 29-44). Depending upon the length of the distance relating to the desired direction of manipulation indicating the deviation or magnitude of the desired direction from the unit direction of manipulation, the scrolling speed is determined as in proportional to the deviation of the direction vector and the processor allows the actuator to decrease the length of the arrow portion of pointer to supply feedback information to the display unit or the touch pad in combination with the pointer (the manipulation unit because both the touch pad and the pointer have been manipulated via the operator's action; see column 5-8).

In view of the above, Watanabe implicitly disclose the claim limitation of "in the course of scrolling the image data, the control unit calculates the deviation between a direction from a reference point in the display unit to the prescribed point in the image data and the direction of

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manipulation of the manipulation unit, and controls drive of the actuator to decrease the force-feedback to be supplied to the manipulation unit with a decrease in the calculated deviation.”

It would have been obvious to have modified Watanabe’s invention to supply force feedback to the manipulation unit after detecting a manipulation state because actuation signals can be converted to a variety of quantities including “force”, “length”, “direction”, “speed”. One of the ordinary skill in the art would have been motivated to provide indication to the operator the magnitude or speed or direction of scrolling can be generated on the map image (column 5-8).

Claim 2:

Watanabe further discloses in the course of scrolling the map image, the control unit calculates a distance or length from a start point in the map image to the end point of the map image and controls the drive of the actuator to supply to the touch-pad and the pointer combination a feedback in the form of the length and direction of the arrow portion of the pointer to indicate the amount of the shift and the scrolling direction of the map image corresponding to the calculated distance or the calculated length between the starting point on the map image and the desired point to be scrolled.

Claim 3:

Watanabe teaches the claim limitation of “calculating the variation of a distance” because Watanabe discloses determining the length of the arrow in nonlinear relationship with the scroll speed.

Claim 4:

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Watanabe further discloses the prescribed point as a destination point of the map image as specified by the operator scrolling the map image (column 5-8).

Claim 5:

Watanabe further discloses the road map image (Figs. 3-4).

Claim 6:

Watanabe further discloses the map data is virtual space data expressed two-dimensionally (Figs. 3-4).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665.

The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw


JEFFREY A. BRINER
PRIMARY EXAMINER

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